REMARKS

Reconsideration and allowance in view of the foregoing amendment and the following
remarks are respectfully requested. Claim 1 is amended without prejudice or disclaimer. Claims
9-16 are cancelled.

Rejection of Claims 9-16 Under 35 U.S.C. §112

The Office Action rejects claims 9-16 under 35 U.S.C. §112, first paragraph, as failing to
comply with the written description requirement. Applicants have cancelled claims 9-16 without
prejudice or disclaimer and respectfully request withdrawal of this rejection.

Rejection of Claims 1-3, 5-6, 8-11, 13-14 and 16-22 Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-3, 5-6, 8-11, 13-14 and 16-22 under 35 U.S.C. §103(a)
as being unpatentable over Arai et al. (U.S. Patent No. 6,173,261) ("Arai et al.") in view of
Attwater et al. (U.S. Patent No. 6,839,671) ("Attwater et al."). Applicants traverse this rejection
and shall explain why, even if combined, these references fail to teach each limitation of the
claims. Applicants note that the rejection with respect to claims 9-16 is rendered moot as much
as these claims are cancelled.

Page 6 of the Office Action asserts that the step of generating a plurality of call types
wherein each generated call type is based on a first set of utterances selected from the collected
plurality of utterances is taught by Arai et al. in several places. First, the Office Action cites
column 2, lines 13-35. Applicants respectfully traverse this analysis and submit that this
reference does not teach a method for generating a natural language understanding model which
includes a step of generating a plurality of call types, each generated call type being based on the
first set of utterances selected from the generated plurality of utterances. This is for several
reasons. First, we note that the concept of call types in column 2 requires that the call types
already exist. In other words, lines 18-20 discuss that after generating grammar fragments

consisting of similar phrases, distances between phrases may be calculated based on the distribution of proceeding words and call types. There is no discussion of how call types are generated but it is assumed from that statement that the call types already exist. Similarly, lines 30-35, which discuss the clustering of phrases into grammar fragments, also simply involve clustering those fragments which are then "exploited by a spoken language understanding module to determine a call classification." Applicants note that this also assumes that the call classification (which is interpreted as call type in the Office Action) already exists. Example call types include routing the call to accounting and another may involve routing the call to a live agent. Here, their disclosure involves clustering phrases into grammar fragments which are then exploited by the spoken language understanding module to determine whether the call involves forwarding the call to the accounting office or forwarding the call to a live agent. This simply provides an example of the context of the teachings of column 2 which inherently require the preexistence of the call types. Therefore, Applicants submit that the teachings of column 2 fail to disclose how the plurality of call types may be generated based on the first set of utterances.

Next, we also note that clearly in lines 30-35 they already assume the existence of the spoken language understanding module and thus this portion also fails to teach a mechanism for generating a natural language understanding model.

Applicants' position is also strengthened from the citation in column 9 to column 10. Here, the Office Action cites that "a set of candidate phrases having a probabilistic relationship with one or more of the sets of predetermined routing objectives (including call types) with which the input speech utterances are associated" and "call-type classification." Applicants note that this portion expressly confirms Applicants' position inasmuch as there must be a "set of predetermined routing objectives with which the input speech utterances are associated." Inasmuch as these are predetermined, Applicants submit that there is no teaching or suggestion

of how these might be generated. The Office Action also equates on line 1 of page 7 call-type classification with generating call types. "Call-type classification" is mentioned in column 10, line 10, as well as line 21 and lines 28-29. Applicants note that in each case, the reference merely talks generically about call-type classification and performance measures for call-type classification. Inasmuch as column 9 talks about their grammar fragment clustering sub-system that operates on a database of a large number of utterances, each of which is related to "one of the predetermined set of routing objectives, where each such utterance is labeled with the associated routing objective, " (See column 9, lines 4-8), Applicants submit that the entire discussion of call-type classification in these columns is clearly related to and requires preexisting or predetermining routing objectives or call types. Therefore, Applicants respectfully traverse the Examiner's interpretation of the reference to column 5 classification as somehow "generating the call-types" because clearly these call-types already exist and in fact are articulated as being already labeled within the utterances. This is in contrast to the present invention in which we generate the plurality of call types based on the set of utterances selected from the collection of the plurality of utterances. Again, the fundamental difference being that the utterances in Arai et al. have been in advance labeled with their associated routing objectives. Therefore, Applicants respectfully submit that this feature is not taught in the reference.

The next step of claim 1 recites generating a first natural language understanding model using call type information contained within the first set of utterances. The Office Action asserts that column 2, lines 6-7 and 20-35 teach this feature. Applicants traverse this analysis and submit that the language models discussed in the reference are not generated using call type information contained within the first set of utterances. For example, as has been noted, it assumes that the call-type information simply already exists and that is what is taught in column 2 (in connection with columns 9 and 10). Therefore, the discussion of using grammar fragments

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and clustering of grammar fragments for use in language models should not be interpreted as the equivalent of generating a first natural language understanding model using call-type information contained within the first set of utterances. Again, this is because Arai et al. fail to make reference to the use of call-type information contained within the first set of utterances. Therefore, Applicants submit that this feature is not taught or suggested in the reference.

This argument also applies to the citation of column 10, lines 30-45, in which a fully expanded salient fragment network is discussed. This is of course because column 10 follows column 9's discussion of the clustering subsystem which utilizes the predetermined set of routing objectives. Thus, the reference teaches away from the present invention.

Rejection of Claims 4, 7, 12 and 15 Under 35 U.S.C. §103(a)

The Office Action rejects claims 4, 7, 12 and 15 under 35 U.S.C. §103(a) as being unpatentable over Arai in view of Attwater et al. and further in view of Maes et al. (U.S. Patent Publication No. 2003/0088421) ("Maes et al."). Applicants submit that inasmuch as the parent claims are patentable, that these claims are patentable and in condition for allowance. Applicants reserve the right to argue against the combination of references.

CONCLUSION

Having addressed all rejections and objections, Applicants respectfully submit that the

subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

If necessary, the Commissioner for Patents is authorized to charge or credit the **Novak, Druce &**

Quigg, LLP, Account No. 14-1437 for any deficiency or overpayment.

Respectfully submitted.

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